

Part 70 Operating Permit Amendment

Permit Amendment No.: 2493-081-0054-V-02-1 **Effective Date:**

Facility Name: **Norbord Georgia, Inc.**
964 Highway 280 West
Cordele, Georgia 31015 [Crisp County]

Mailing Address: 964 Highway 280 West
Cordele, Georgia 31015

Parent/Holding Company: Norbord Georgia, Inc.

Facility AIRS Number: 04-13-081-00054

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Georgia Rules for Air Quality Control, Chapter 391-3-1, adopted pursuant to and in effect under the Act, the Permittee described above is issued a construction and Part 70 permit for:

a PSD Plant Expansion to increase the production rate of oriented strandboard. This expansion includes two dryers, an energy system, debarkers, green and dry wafer storage bins, resin storage tanks, blending and forming equipment, one board press, finishing operations, and one edge coat seal line.

This Permit Amendment shall also serve as a final amendment to the Part 70 Permit unless objected to by the U.S. EPA or withdrawn by the Division. The Division will issue a letter when this Operating Permit amendment is finalized.

This Permit Amendment is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Permit Amendment and Permit No. 2493-081-0054-V-02-0. Unless modified or revoked, this Permit Amendment expires upon issuance of the next Part 70 Permit for this source.

This Permit Amendment may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in Application No. 15812 dated November 5, 2004; any other applications upon which this Permit Amendment or Permit No. 2493-081-0054-V-02-0 are based; supporting data entered therein or attached thereto; or any subsequent submittal or supporting data; or for any alterations affecting the emissions from this source.

This Permit Amendment is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **32** pages, which pages are a part of this Permit Amendment, and which hereby become part of Permit No. 2493-081-0054-V-02-0.

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Director
Environmental Protection Division

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PART 1.0 FACILITY DESCRIPTION**1.3 Process Description of Modification**

Trees (typical southern yellow pine) are received by truck, cut to length, debarked, flaked, stored in two green metering bins, and dried in one of two wood flake rotary dryers. The dry flakes are collected in the primary cyclones, fed to two rotary screens for fines removal, and conveyed to the core and/or surface dry storage bins. The flakes are metered from the dry bins and mixed with wax and resin in the core and/or surface dry storage bins. Orienting heads align the flakes into a continuous mat on the forming line. The mat is cut into sections, pressed several minutes at elevated temperature and pressure in a board press, trimmed to size, graded, sanded as required, edge coated, and packaged.

Emissions from the board press are controlled by an oxidizer system. Emissions from the mat forming and trimming operations are controlled by baghouses.

Energy for the new wood flake dryers and thermal oil system for press heat is supplied by a new wood-fired energy system which is rated at approximately 285 MMBtu/hr. A portion of the energy system exhaust gas passes through the rotary dryers, mentioned above, which exhausts through a wet electrostatic precipitator and a regenerative thermal oxidizer operating in series. The remaining portion of the energy system's exhaust gases passes through a new thermal oil heater which heats thermal oil to be used to heat the new board press.

PART 2.0 REQUIREMENTS PERTAINING TO THE ENTIRE FACILITY

2.1 Facility Wide Emission Caps and Operating Limits

None applicable.

2.2 Facility Wide Federal Rule Standards

None applicable.

2.3 Facility Wide SIP Rule Standards

None applicable.

2.4 Facility Wide Standards Not Covered by a Federal or SIP Rule and Not Instituted as an Emission Cap or Operating Limit

None applicable.

PART 3.0 REQUIREMENTS FOR EMISSION UNITS

Note: Except where an applicable requirement specifically states otherwise, the averaging times of any of the Emissions Limitations or Standards included in this permit are tied to or based on the run time(s) specified for the applicable reference test method(s) or procedures required for demonstrating compliance.

3.1.1 Additional Emission Units

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
ES02	Energy System fired with wood and natural gas	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 40 CFR 52.21 40 CFR 60 Subpart Db 40 CFR 63 Subpart DDDD	3.3.13, 3.3.14, 3.3.15, 3.3.16, 3.3.17, 3.3.18, 3.3.19, 3.3.20, 3.3.38, 3.3.39, 3.4.3, 4.2.2, 4.2.3, 4.2.4, 4.2.5, 4.2.6, 4.2.7, 4.2.8, 5.2.10, 5.2.11, 5.2.12, 5.2.13, 5.2.18, 5.2.19, 5.2.20, 5.2.21, 6.1.7, 6.2.3, 6.2.4, 6.2.8, 6.2.10	WP02 C21A C21B	Wet Electrostatic Precipitator Regenerative Thermal Oxidizer Regenerative Thermal Oxidizer
GB05	Green Bin #5	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 52.21 40 CFR 63 Subpart DDDD	3.3.13, 3.3.14, 3.3.32, 3.3.33, 3.3.38, 3.3.39, 4.2.18, 5.2.14, 5.2.15, 5.2.16, 5.2.17, 6.1.7, 6.2.10	C206	Wet Strand Fines Baghouse
GB06	Green Bin #6	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 52.21 40 CFR 63 Subpart DDDD	3.3.13, 3.3.14, 3.3.32, 3.3.33, 3.3.38, 3.3.39, 4.2.18, 5.2.14, 5.2.15, 5.2.16, 5.2.17, 6.1.7, 6.2.10	C206	Wet Strand Fines Baghouse
RD05	Wood Flake Rotary Dryer #5	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 52.21 40 CFR 63 Subpart DDDD	3.3.13, 3.3.14, 3.3.15, 3.3.18, 3.3.19, 3.3.20, 3.3.38, 3.3.39, 3.4.4, 4.2.2, 4.2.3, 4.2.4, 4.2.5, 4.2.6, 4.2.7, 4.2.8, 5.2.10, 5.2.11, 5.2.12, 5.2.13, 5.2.18, 5.2.19, 5.2.20, 5.2.21, 6.1.7, 6.2.3, 6.2.4, 6.2.10	WP02 C21A C21B	Wet Electrostatic Precipitator Regenerative Thermal Oxidizer Regenerative Thermal Oxidizer

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Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
RD06	Wood Flake Rotary Dryer #6	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 52.21 40 CFR 63 Subpart DDDD	3.3.13, 3.3.14, 3.3.15, 3.3.18, 3.3.19, 3.3.20, 3.3.38, 3.3.39, 3.4.4, 4.2.2, 4.2.3, 4.2.4, 4.2.5, 4.2.6, 4.2.7, 4.2.8, 5.2.10, 5.2.11, 5.2.12, 5.2.13, 5.2.18, 5.2.19, 5.2.20, 5.2.21, 6.1.7, 6.2.3, 6.2.4, 6.2.10	WP02 C21A C21B	Wet Electrostatic Precipitator Regenerative Thermal Oxidizer Regenerative Thermal Oxidizer
RS05	Rotary Screen #5	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 52.21 40 CFR 63 Subpart DDDD	3.3.13, 3.3.14, 3.3.28, 3.3.29, 3.3.38, 3.3.39, 4.2.16, 5.2.14, 5.2.15, 5.2.16, 5.2.17, 6.1.7, 6.2.10	C204	Un-Resinated Fines Baghouse
RS06	Rotary Screen #6	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 52.21 40 CFR 63 Subpart DDDD	3.3.13, 3.3.14, 3.3.28, 3.3.29, 3.3.38, 3.3.39, 4.2.16, 5.2.14, 5.2.15, 5.2.16, 5.2.17, 6.1.7, 6.2.10	C204	Un-Resinated Fines Baghouse
DB05	Dry Bin #5	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 52.21 40 CFR 63 Subpart DDDD	3.3.13, 3.3.14, 3.3.35, 3.3.38, 3.3.39, 4.2.20, 5.2.14, 5.2.15, 5.2.16, 5.2.17, 6.1.7, 6.2.10	C208	Blowline Baghouse
DB06	Dry Bin #6	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 52.21 40 CFR 63 Subpart DDDD	3.3.13, 3.3.14, 3.3.35, 3.3.38, 3.3.39, 4.2.20, 5.2.14, 5.2.15, 5.2.16, 5.2.17, 6.1.7, 6.2.10	C208	Blowline Baghouse
FB05	Flake Blender #5	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 52.21 40 CFR 63 Subpart DDDD	3.3.13, 3.3.14, 3.3.35, 3.3.38, 3.3.39, 4.2.15, 5.2.14, 5.2.15, 5.2.16, 5.2.17, 6.1.7, 6.2.10	C203	Resinated Fines Baghouse
FB06	Flake Blender #6	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 52.21 40 CFR 63 Subpart DDDD	3.3.13, 3.3.14, 3.3.26, 3.3.27, 3.3.38, 3.3.39, 4.2.15, 5.2.14, 5.2.15, 5.2.16, 5.2.17, 6.1.7, 6.2.10	C203	Resinated Fines Baghouse
FLP2	Forming Line & Prepress	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 52.21 40 CFR 63 Subpart DDDD	3.3.13, 3.3.14, 3.3.26, 3.3.27, 3.3.38, 3.3.39, 4.2.15, 5.2.14, 5.2.15, 5.2.16, 5.2.17, 6.1.7, 6.2.10	C203	Resinated Fines Baghouse

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Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
PRS2	Board Press/Unloader	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 52.21 40 CFR 63 Subpart DDDD	3.3.13, 3.3.14, 3.3.21, 3.3.22, 3.3.23, 3.3.24, 3.3.25, 3.3.38, 3.3.39, 4.2.9, 4.2.10, 4.2.11, 4.2.12, 4.2.13, 4.2.14, 5.2.13, 5.2.14, 6.1.7, 6.2.10	C202	Oxidizer System – (1), (2)
L2SS	Trimming/Finishing Operations	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 52.21	3.3.13, 3.3.14, 3.3.30, 3.3.31, 3.3.38, 3.3.39, 4.2.17, 5.2.14, 5.2.15, 5.2.16, 5.2.17, 6.1.7, 6.2.10	C205	Finishing Line Baghouse
L2SD	Trimming/Finishing Operations	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 52.21 40 CFR 63 Subpart DDDD	3.3.13, 3.3.14, 3.3.30, 3.3.31, 3.3.38, 3.3.39, 4.2.17, 5.2.14, 5.2.15, 5.2.16, 5.2.17, 6.1.7, 6.2.10	C205	Finishing Line Baghouse
DFS2	Dry Fuel System	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 52.21 40 CFR 63 Subpart DDDD	3.3.13, 3.3.14, 3.3.34, 3.3.39, 4.2.19, 5.2.14, 5.2.15, 5.2.16, 5.2.17, 6.1.7, 6.2.10	C207	Dry Fuel Storage Silo #2 Baghouse
HPW2	High Pressure Waste System	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 52.21 40 CFR 63 Subpart DDDD	3.3.13, 3.3.14, 3.3.35, 3.3.38, 3.3.39, 4.2.20, 5.2.14, 5.2.15, 5.2.16, 5.2.17, 6.1.7, 6.2.10	C208	Blowline Baghouse
V024	Resin Storage Tank	40 CFR 52.21 40 CFR 63 Subpart DDDD	3.3.14, 3.3.38, 3.3.39, 6.2.10	None	NA
V025	Resin Storage Tank	40 CFR 52.21 40 CFR 63 Subpart DDDD	3.3.14, 3.3.38, 3.3.39, 6.2.10	None	NA
GEN1	705 hp Emergency Diesel Generator	391-3-1-.02(2)(g) 391-3-1-.02(2)(b) 40 CFR 52.21	3.3.13, 3.3.14, 3.3.36, 3.3.38, 3.3.39, 3.4.5, 5.2.14, 6.2.5, 6.2.6, 6.2.7, 6.2.10	None	NA
EC02	Edge Coating Line #2	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 52.21 40 CFR 63 Subpart DDDD	3.3.13, 3.3.14, 3.3.37, 3.3.38, 3.3.39, 6.2.10	None	NA

* Generally applicable requirements contained in this permit may also apply to emission units listed above.

(1) Oxidizer System = Regenerative Catalytic Oxidizer, Regenerative Thermal Oxidizer, or Thermal Catalytic Oxidizer

(2) PRS2 will first exhaust to a pretreatment system before entering the oxidizer system.

3.2 Equipment Emission Caps and Operating Limits

None Applicable.

3.3 Equipment Federal Rule Standards

NEW CONDITIONS

- 3.3.13 The Permittee shall not discharge, or cause the discharge, into the atmosphere from the Green Bins (Source Codes GB05 and GB06); the Energy System (Source Code ES02); the Wood Flake Dryers (Source Codes RD05 and RD06); the Rotary Screens (Source Codes RS05 and RS06); the Dry Bins (Source Codes DB05 and DB06); the Flake Blenders (Source Code FB05 and FB06); the Forming Line and Prepress (Source Code FLP2); the Board Press/Unloader (Source Code PRS2); the Trimming and Finishing Operations (Source Codes L2SS and L2SD); the High Pressure Waste System (Source Code HPW2); the Dry Fuel System (Source Code DFS2); Edge Coating Line #2 (Source Code EC02); and the emergency diesel generator (Source Code GEN1), each, gases which exhibit opacity in excess of twenty (20) percent, except for one six-minute period per hour of not more than twenty-seven (27) percent opacity. This condition applies during periods of startup, shutdown, and malfunction.
[40 CFR 52.21(j); 391-3-1-.02(2)(b) (subsumed); and 40 CFR Part 60 Subpart Db (subsumed for the energy system)]
- 3.3.14 The Permittee shall comply with all applicable provisions of the 40 CFR Part 63, Subpart A – “General Provisions” and Subpart DDDD – “National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products,” for the operation of equipment defined in 40 CFR 63.2232. The compliance date for 40 CFR 63 Subpart DDDD is October 1, 2007.

Energy System and Wood Flake Dryers

- 3.3.15 The Permittee shall not discharge, or cause the discharge, into the atmosphere, from the energy system/dryers combined stack (Source Codes RD05, RD06 and ES02), gases which contain **Particulate Matter** in excess of 28.5 pounds per hour.
[40 CFR 52.21(j) and 391-3-1-.02(2)(e)(subsumed)]
- 3.3.16 The Permittee shall comply with all applicable provisions of the New Source Performance Standards (NSPS) as found in 40 CFR Part 60, Subpart A – “General Provisions” and Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units,” for operation of the energy system (ES02).
- 3.3.17 The Permittee shall not discharge, or cause the discharge, into the atmosphere, from Energy System ES02 gases which contain **Particulate Matter** in excess of that allowed by 40 CFR 60 Subpart Db.
[40 CFR 60.43b(c)(1)]
- 3.3.18 The Permittee shall not discharge, or cause the discharge, into the atmosphere, from the energy system/dryers combined stack (Source Codes RD05, RD06, and ES02) gases which contain **Nitrogen Oxides** (NO_x) in excess of 78.4 pounds per hour.
[40 CFR 52.21(j)]

- 3.3.19 The Permittee shall not discharge, or cause the discharge, into the atmosphere, from the energy system/dryers combined stack (Source Codes RD05, RD06, and ES02) gases which contain **Carbon Monoxide** in excess of 78.4 pounds per hour. [40 CFR 52.21(j)]
- 3.3.20 The Permittee shall not discharge, or cause the discharge, into the atmosphere, from the energy system/dryers combined stack (Source Codes RD05, RD06, and ES02) gases which contain **Volatile Organic Compounds** in excess of 59.8 pounds per hour. [40 CFR 52.21(j)]

Press/Unloader System

- 3.3.21 The Permittee shall not discharge, or cause the discharge, into the atmosphere from the Board Press/Unloader (Source Code PRS2), any gases which contain **Volatile Organic Compounds** in excess of 11.4 pounds per hour. [40 CFR 52.21(j)]
- 3.3.22 The Permittee shall not discharge, or cause the discharge, into the atmosphere from the Board Press/Unloader (Source Code PRS2), any gases which contain **Particulate Matter** in excess of 4.0 lb/hr. [40 CFR 52.21(j)]
- 3.3.23 The Permittee shall install and operate and maintain a *total enclosure* around the Board Press/Unloader (Source Code PRS2) and vent the captured emissions from the *total enclosure* to the oxidation system (Source Code C202). [40 CFR 52.21(j)]
- 3.3.24 For purposes of this Permit, the term *total enclosure* shall mean a structure that is constructed around a source of emissions and operated so that all VOC emissions are collected and exhausted through a stack. [40 CFR 52.21]
- 3.3.25 The *total enclosure* required by Condition 3.3.23 shall comply with Method 204 for a *permanent total enclosure*. [40 CFR 52.21]

Baghouses

- 3.3.26 The Permittee shall not discharge, or cause the discharge, into the atmosphere from the Resinated Fines Operation (Source Codes FB05, FB06, and FLP2) on a combined basis, any gases which contain **Particulate Matter** in excess of 1.89 lb/hr. [40 CFR 52.21(j) and 391-3-1-.02(2)(e)(subsumed)]
- 3.3.27 The Permittee shall not discharge, or cause the discharge, into the atmosphere from the Resinated Fines Operation (Source Codes FB05, FB06, and FLP2) on a combined basis, any gases which contain **Volatile Organic Compounds** in excess of 11.9 lb/hr. [40 CFR 52.21(j)]
- 3.3.28 The Permittee shall not discharge, or cause the discharge, into the atmosphere from the Un-Resinated Fines Operation (Source Codes RS05 and RS06) on a combined basis, any gases which contain **Particulate Matter** in excess of 1.89 lb/hr. [40 CFR 52.21(j) and 391-3-1-.02(2)(e)(subsumed)]

- 3.3.29 The Permittee shall not discharge, or cause the discharge, into the atmosphere from the Un-Resinated Fines Operation (Source Codes RS05 and RS06) on a combined basis, any gases which contain **Volatile Organic Compounds** in excess of 8.9 lb/hr.
[40 CFR 52.21(j)]
- 3.3.30 The Permittee shall not discharge, or cause the discharge, into the atmosphere from the Finishing Line Operation (Source Codes L2SD and L2SS) on a combined basis, any gases which contain **Particulate Matter** in excess of 1.89 lb/hr.
[40 CFR 52.21(j) and 391-3-1-.02(2)(e)(subsumed)]
- 3.3.31 The Permittee shall not discharge, or cause the discharge, into the atmosphere from the Finishing Line Operation (Source Codes L2SD and L2SS) on a combined basis, any gases which contain **Volatile Organic Compounds** in excess of 1.1 lb/hr.
[40 CFR 52.21(j)]
- 3.3.32 The Permittee shall not discharge, or cause the discharge, into the atmosphere from the Wet Strand Fines (Source Codes GB05 and GB06) on a combined basis, any gases which contain **Particulate Matter** in excess of 1.89 lb/hr.
[40 CFR 52.21(j) and 391-3-1-.02(2)(e)(subsumed)]
- 3.3.33 The Permittee shall not discharge, or cause the discharge, into the atmosphere from the Wet Strand Fines (Source Codes GB05 and GB06) on a combined basis, any gases which contain **Volatile Organic Compounds** in excess of 4.5 lb/hr.
[40 CFR 52.21(j)]
- 3.3.34 The Permittee shall not discharge, or cause the discharge, into the atmosphere from the Dry Fuel Storage (Source Code DFS2), any gases which contain **Particulate Matter** in excess of 2.1 lb/hr.
[40 CFR 52.21(j) and 391-3-1-.02(2)(e)(subsumed)]
- 3.3.35 The Permittee shall not discharge, or cause the discharge, into the atmosphere from the Blowline (Source Codes DB05, DB06, and HPW2) on a combined basis, any gases which contain **Particulate Matter** in excess of 0.26 lb/hr.
[40 CFR 52.21(j) and 391-3-1-.02(2)(e)(subsumed)]

Emergency Generator

- 3.3.36 The Permittee shall not operate the generator with Source Code GEN1 for more than 250 hours during any twelve consecutive months. [40 CFR 52.21(j)]

Edge Coating Line #2

3.3.37 The Permittee shall not discharge, or cause the discharge, into the atmosphere from the Edge Coating Line #2 (Source Code EC02), particulate emissions in excess of the rate derived by the following equation: [40 CFR 52.21(j) and 391-3-1-.02(2)(e)(subsumed)]

- a. For process input weight rate up to and including 30 tons per hour:

$$E = 4.1P^{0.67}$$

- b. For process input weight rate greater than 30 tons per hour:

$$E = 55P^{0.11} - 40$$

where E equals the allowable particulate matter emission rate in pounds per hour and P equals the dry process input weight rate in tons per hour.

General Requirements

3.3.38 The Permittee shall commence construction on the equipment noted in Section 3.1.1 and Attachment B within 18 months from the effective date of the final permit to construct. In the event that construction of any of these units has not commenced by the date specified, and absent approval by the Division for an extension of the commencement date, this Permit shall become null and void with respect to that unit and other units yet to be constructed. The Permit will remain in full force and effect with regard to any units for which commencement of construction has begun by the date specified. For purposes of this Permit, the definition of “commence” is given in 40 CFR 52.21(b)(9). [40 CFR 52.21(r)]

3.3.39 The construction of the equipment noted in Section 3.1.1 and Attachment B shall be completed within 24 months from the effective date of the final permit to construct and the date that such construction is legally authorized to commence without interruption. In the event that construction of any of these units is not completed by the date specified, and absent approval by the Division for an extension of the completion date, this Permit shall become null and void with respect to that unit and all units yet to be constructed. The Permit will remain in full force and effect with regard to any units for which construction has been completed by the applicable construction deadline. [40 CFR 52.21(r)]

3.4 Equipment SIP Rule Standards

NEW CONDITIONS

3.4.3 The Permittee shall not fire any fuel in the Energy System (Source Code ES02) whose sulfur content exceeds 3.0 weight percent sulfur. [391-3-1-.02(2)(g)]

3.4.4 The Permittee shall not fire any fuel in the auxiliary burners in the flake dryers (Source Codes RD05 and RD06) whose sulfur content exceeds 2.5 weight percent sulfur. [391-3-1-.02(2)(g)]

3.4.5 The Permittee shall not fire any fuel in the emergency generator (Source Code GEN1) whose sulfur content exceeds 2.5 weight percent sulfur. [391-3-1-.02(2)(g)]

3.5 Equipment Standards Not Covered by a Federal or SIP Rule and Not Instituted as an Emission Cap or Operating Limit

None Applicable.

PART 4.0 REQUIREMENTS FOR TESTING**4.1 General Testing Requirements**

- 4.1.3 Performance and compliance tests shall be conducted and data reduced in accordance with applicable procedures and methods specified in the Division's Procedures for Testing and Monitoring Sources of Air Pollutants. The methods for the determination of compliance with emission limits listed under Sections 3.2, 3.3, 3.4 and 3.5 which pertain to the emission units listed in Section 3.1 are as follows:

MODIFIED CONDITIONS

- e. Method 5 shall be used for the determination of particulate matter concentration for sources other than the wood flake dryers (Source Codes RD01, RD02, RD03, RD04, RD05, and RD06), the board presses (Source Codes PRES and PRS2), and the baghouses with Source Codes C203, C204, and C206.
- f. Method 5T shall be used for the determination of particulate matter concentration for the wood flake dryers (Source Codes RD01, RD02, RD03, RD04, RD05, and RD06), the board presses (Source Codes PRES and PRS2), and the baghouses with Source Codes C203, C204, and C206.
- k. Method 25 shall be used for the determination of volatile organic compounds (VOC) concentration, as carbon. Method 25A may be used for this purpose at the discretion of the Director. When determining the emission rate from either Press Vent System (Source Code PRES or PRS2), the emission rate of formaldehyde shall be added to the emission rate as determined using Method 25A. Appropriate conversion factors must be used to convert the VOC (as carbon) to actual VOC.
- m. EPA Method 316 in Appendix A of Part 63 shall be used for the determination of formaldehyde concentration. Alternatively, the NCASI *Chilled Impinger Method for Use at Wood Products Mills to Measure Phenol and Formaldehyde* may be used.

NEW CONDITION

- n. Method 204, *Criteria and Verification of a Permanent or Temporary Total Enclosure*, shall be used for the verification of the enclosure around the Board Press/Unloader (Source Code PRS2).

Minor changes in methodology may be specified or approved by the Director or his designee when necessitated by process variables, changes in facility design, or improvement or corrections that, in his opinion, render those methods or procedures, or portions thereof, more reliable.

[391-3-1-.02(3)(a)]

4.2 Specific Testing Requirements

Initial Testing Requirements for the Energy System/Dryers Combined Stack

4.2.2 Within 60 days after achieving the maximum production rate at which the energy system (ES02) and one or both of the new dryers (RD05 and RD06) will be operated on a combined basis, but no later than 180 days after initial startup of the energy system and one or both of the new dryers, the Permittee shall conduct the following performance tests and furnish to the Division a written report of the results of such performance tests:

- a. Performance tests for nitrogen oxides emissions to verify compliance with Condition 3.3.18. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
- b. Performance tests for carbon monoxide emissions to verify compliance with Condition 3.3.19. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
- c. Performance tests for particulate matter to verify compliance with Condition 3.3.15. [391-3-1-.02(6)(b)1(i), 40 CFR 52.21, 40 CFR 60.8, 40 CFR 60.44b(d)]
- d. Performance tests for volatile organic compounds to verify compliance with Condition 3.3.20. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
- e. Performance tests for opacity to verify compliance with Condition 3.3.13 [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]

The performance tests for nitrogen oxides, carbon monoxide and volatile organic compound shall be conducted concurrently.

4.2.3 During the performance tests specified in Condition 4.2.2 for PM emissions, the Permittee shall measure and record the secondary voltage at least once per ten minutes and shall determine the secondary voltage range representative of good operation of the Wet Electrostatic Precipitator (WESP, Source Code WP02). The Permittee shall submit with the performance test report, for acceptance by the Division, the secondary voltage data recorded during the performance test and the proposed secondary voltage range. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]

4.2.4 During the performance tests specified in Condition 4.2.2 for PM emissions, the Permittee shall measure and record the temperature of the gas stream at the outlet of the quench chamber and shall determine the temperature range representative of good operation of the WESP (Source Code WP02). The Permittee shall submit with the performance test report, for acceptance by the Division, the temperature data recorded during the performance test and the selected temperature range. [391-3-1-.02(6)(b)1(i) and 40 CFR 70.6(a)(3)(i)]

- 4.2.5 During the performance tests specified in Condition 4.2.2 for PM emissions, the Permittee shall measure and record the water flow rate at the mist flow pump and shall determine the water flow rate range representative of good operation of the WESP (Source Code WP02). The Permittee shall submit with the performance test report, for acceptance by the Division, the water flow rate data and the selected water flow rate range.
[391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
- 4.2.6 During the performance tests specified in Condition 4.2.2 for VOC emissions, the Permittee shall continuously measure and record the oxidizer retention chamber temperature of the Regenerative Thermal Oxidizer (Source Code C21A or C21B) and shall determine the average oxidizer retention chamber temperature from the recorded values. The Permittee shall submit, with the performance test report, the average oxidizer retention chamber temperature and the oxidizer retention chamber temperature data recorded during the performance test.
[391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
- 4.2.7 During the performance tests specified in Condition 4.2.2 for CO and VOC emissions, the Permittee shall determine the CO emissions rate in pounds per hour that corresponds to a VOC emissions rate specified in Condition 3.3.20 in order to identify a CO emissions rate that would be defined as an excursion of the VOC emissions rate specified in Condition Nos. 3.3.20 and 6.1.7.c. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]

NSPS Db Requirements for Energy System

- 4.2.8 Within 60 days after achieving the maximum production rate at which the energy system (ES02) will be operated, but no later than 180 days after initial startup of the energy system the Permittee shall conduct the following performance tests and furnish to the Division a written report of the results of such performance tests:
- a. Performance tests for particulate matter to verify compliance with Condition 3.3.17
[391-3-1-.02(6)(b)1(i), 40 CFR 52.21, 40 CFR 60.8, and 40 CFR 60.44b(d)]

Initial Testing Requirements for the Board Press/Unloader

- 4.2.9 Within 180 days after initial startup of the board press/unloader (Source Code PRS2), the Permittee shall conduct the following performance tests and furnish to the Division a written report of the results of such performance tests:
- a. Performance tests for particulate matter to verify compliance with Condition 3.3.22.
[391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
- b. Performance tests for volatile organic compounds to verify compliance with Condition 3.3.21. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
- c. Performance tests for opacity to verify compliance with Condition 3.3.13.
[391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]

- 4.2.10 During the performance tests specified in Condition 4.2.9 for VOC emissions, the Permittee shall measure and record the oxidizer retention chamber temperature of Regenerative Thermal Oxidizer C202 (controlling emissions from the board press/unloader with Source Code PRS2) at least once per ten minutes and shall determine the average oxidizer retention chamber temperature from the recorded values. The Permittee shall submit, with the performance test report, the average oxidizer retention chamber temperature and the oxidizer retention chamber temperature data recorded during the performance test. The requirements of this condition apply as part of the testing requirements established in Condition 4.2.9 only if the Permittee elects to construct and operate a Regenerative Thermal Oxidizer at the outlet of the Board Press/Unloader (Source Code PRS2). [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
- 4.2.11 During the performance tests specified in Condition 4.2.9 for VOC emissions, the Permittee shall measure and record the inlet and outlet gas stream temperature of the Regenerative Catalytic Oxidizer C202 at least once per ten minutes and shall determine the average inlet and outlet gas stream temperature from the recorded values. The Permittee shall submit, with the performance test report, the inlet and outlet gas stream temperature and the inlet and outlet gas stream temperature data recorded during the performance test. The requirements of this condition apply as part of the testing requirements established in Condition 4.2.9 only if the Permittee elects to construct and operate a Regenerative Catalytic Oxidizer at the outlet of the Board Press/Unloader (Source Code PRS2). [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
- 4.2.12 During the performance tests specified in Condition 4.2.9 for VOC emissions, the Permittee shall measure and record the inlet and outlet gas stream temperature of the Thermal Catalytic Oxidizer C202 operating in catalytic mode at least once per ten minutes and shall determine the average inlet and outlet temperature from the recorded values. The Permittee shall submit, with the performance test report, the inlet and outlet gas stream temperature and the inlet and outlet gas stream temperature data recorded during the performance test. The requirements of this condition apply as part of the testing requirements established in Condition 4.2.9 only if the Permittee elects to construct and operate a Thermal Catalytic Oxidizer in catalytic mode at the outlet of the Board Press/Unloader (Source Code PRS2). [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
- 4.2.13 During the performance tests specified in Condition 4.2.9 for VOC emissions, the Permittee shall measure and record the outlet temperature of the Thermal Catalytic Oxidizer C202 operating in thermal mode at least once per ten minutes and shall determine the average outlet temperature from the recorded values. The Permittee shall submit, with the performance test report, the outlet temperature and the outlet temperature data recorded during the performance test. The requirements of this condition apply as part of the testing requirements established in Condition 4.2.9 only if the Permittee elects to construct and operate a Thermal Catalytic Oxidizer in thermal mode at the outlet of the Board Press/Unloader (Source Code PRS2). [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]

- 4.2.14 Within ninety (90) days after achieving the maximum production rate which the Board Press/Unloader (Source Code PRS2) will be operated, but no later than 180 days after the initial startup of the Board Press/Unloader (Source Code PRS2), the Permittee shall verify that the Board/Press/Unloader meet the Division's criteria for a permanent total enclosure. During this verification, the Permittee shall measure the velocity pressure (inches of water column) using a pitot tube in the total enclosure duct before the inlet of the oxidizer system (C202) fan. The Permittee shall submit, with the performance test report, the velocity pressure data recorded during the performance test and the value or range for velocity pressure indicative of the enclosure meeting the Division's criteria for a permanent total enclosure. All test results shall be submitted to the Division within sixty (60) days of the completion of testing. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]

Initial Testing Requirements for the Baghouses

- 4.2.15 Within 180 days after initial startup any portion of the Resinated Fines Operation (Source Codes FB05, FB06, and FLP2), the Permittee shall conduct the following performance tests and furnish to the Division a written report of the results of such performance tests:
- a. Performance tests for particulate matter to verify compliance with Condition 3.3.26. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
 - b. Performance tests for volatile organic compounds to verify compliance with Condition 3.3.27. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
 - c. Performance tests for opacity to verify compliance with Condition 3.3.13. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
- 4.2.16 Within 60 days after achieving the maximum production rate at which the Un-Resinated Fines Operation (Source Codes RS05 and RS06) will be operated, but no later than 180 days after the initial startup of the Un-Resinated Fines Operation, the Permittee shall conduct the following performance tests and furnish to the Division a written report of the results of such performance tests:
- a. Performance tests for particulate matter to verify compliance with Condition 3.3.28. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
 - b. Performance tests for volatile organic compounds to verify compliance with Condition 3.3.29. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
 - c. Performance tests for opacity to verify compliance with Condition 3.3.13. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]

- 4.2.17 Within 60 days after achieving the maximum production rate at which the Finishing Line Operation (Source Codes L2SD and L2SS) will be operated, but no later than 180 days after the initial startup of the Finishing Line Operation, the Permittee shall conduct the following performance tests and furnish to the Division a written report of the results of such performance tests:
- a. Performance tests for particulate matter to verify compliance with Condition 3.3.30. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
 - b. Performance tests for volatile organic compounds to verify compliance with Condition 3.3.31. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
 - c. Performance tests for opacity to verify compliance with Condition 3.3.13. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
- 4.2.18 Within 60 days after achieving the maximum production rate at which the Wet Strand Fines Operation (Source Codes GB05 and GB06) will be operated, but no later than 180 days after the initial startup of the Wet Strand Fines Operation, the Permittee shall conduct the following performance tests and furnish to the Division a written report of the results of such performance tests:
- a. Performance tests for particulate matter to verify compliance with Condition 3.3.32. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
 - b. Performance tests for volatile organic compounds to verify compliance with Condition 3.3.33. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
 - c. Performance tests for opacity to verify compliance with Condition 3.3.13. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
- 4.2.19 Within 60 days after achieving the maximum production rate at which the Dry Fuel Storage Operation (Source Code DFS2) will be operated, but no later than 180 days after the initial startup of the Dry Fuel Storage, the Permittee shall conduct the following performance tests and furnish to the Division a written report of the results of such performance tests:
- a. Performance tests for particulate matter to verify compliance with Condition 3.3.34. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
 - b. Performance tests for opacity to verify compliance with Condition 3.3.35. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]

4.2.20 Within 60 days after achieving the maximum production rate at which the Blowline Operation (Source Codes DB05, DB06, and HPW2) will be operated, but no later than 180 days after the initial startup of the Blowline Operation, the Permittee shall conduct the following performance tests and furnish to the Division a written report of the results of such performance tests:

- a. Performance tests for particulate matter to verify compliance with Condition 3.3.35. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]
- b. Performance tests for opacity to verify compliance with Condition 3.3.13. [391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]

Other Testing Requirements

4.2.21 The Permittee shall conduct performance tests as specified by the following table and criteria unless otherwise specified by the Division:

[391-3-1-.02(6)(b)1(i), 40 CFR 52.21, and 391-3-1-.02(2)(a)(10)]

Equipment	Pollutants
Board Press/Unloader (Source Code PRS2)	Volatile Organic Compounds – Annual Particulate Matter - Annual

- a. Where the results of a performance test which is required annually are less than or equal to fifty (50) percent of the allowable limit, the Permittee may skip the next scheduled performance test.
- b. Where the results of a performance test which is required annually are greater than eighty-five (85) percent of the allowable limit, the Permittee shall begin testing on a semiannual basis with the next performance test due approximately six months following that test. If any subsequent test is less than or equal to 85 percent of the allowable limit, the Permittee shall resume annual testing. The provisions of Condition 4.2.21.a do not apply until the results of two consecutive tests are less than or equal to 85 percent of the allowable limit.

PART 5.0 REQUIREMENTS FOR MONITORING (Related to Data Collection)**5.2 Specific Monitoring Requirements****NEW CONDITIONS**

5.2.10 The Permittee shall install, calibrate, maintain, and operate a system to continuously monitor and record the indicated pollutants on the following equipment. Each system shall meet the applicable performance specification(s) of the Division's monitoring requirements.

- a. A Continuous Emissions Monitoring System (CEMS) for measuring NO_x concentration and diluent concentration (either oxygen or carbon dioxide) discharge to the atmosphere from the energy system and dryers combined stack (Source Codes ES02, RD05, and RD06). The diluent concentration shall be expressed in percent. The one-hour average NO_x emissions rates measured by the system shall be expressed in pounds per hour. [391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 52.21]
- b. A Continuous Emissions Monitoring System (CEMS) for measuring CO concentration and diluent concentration (either oxygen or carbon dioxide) discharge to the atmosphere from the energy system and dryers combined stack (Source Codes ES02, RD05, and RD06). The diluent concentration shall be expressed in percent. The one-hour average CO emissions rates measured by the system shall be expressed in pounds per hour. [391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 52.21]
- c. A Continuous Opacity Monitoring System (COMS) for the measurement of opacity on the energy system and dryers combined stack (Source Codes ES02, RD05, and RD06). [391-3-1-.02(6)(b)1; 40 CFR 70.6(a)(3)(i); 40 CFR 52.21; and 40 CFR 60.48b(a) and 40 CFR 60.49b(f) for the energy system]

5.2.11 The Permittee shall, for the NO_x Continuous Emissions Monitoring System installed on the energy system and dryers combined stack (Source Codes ES02, RD05, and RD06), initiate a quality assurance procedure by performing daily calibration drift tests (assessments) and data accuracy assessments, annual relative accuracy audit tests (RATA) and three quarterly cylinder gas audits during quarters when RATA is not performed. These procedures shall be conducted as detailed in Procedure 1 (Appendix F) of the Division's **Procedures for Testing and Monitoring Sources of Air Pollutants** and 40 CFR Part 60. [391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 60.13]

5.2.12 The Permittee shall, for the CO Continuous Emissions Monitoring System installed on the energy system and dryers combined stack (Source Codes ES02, RD05, and RD06), initiate a quality assurance procedure by performing daily calibration drift tests (assessments) and data accuracy assessments, annual relative accuracy audit tests (RATA) and three quarterly cylinder gas audits during quarters when RATA is not performed. These procedures shall be conducted as detailed in Procedure 1 (Appendix F) of the Division's **Procedures for Testing and Monitoring Sources of Air Pollutants** and 40 CFR Part 60. [391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 60.13]

- 5.2.13 The Permittee shall install, calibrate, maintain, and operate a system to continuously monitor and record the indicated parameters on the following equipment. Where such performance specification(s) exist, each system shall meet the applicable performance specification(s) of the Division's monitoring requirements. [391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]
- a. The combustion zone temperature of the oxidizer retention chamber of Regenerative Thermal Oxidizer with Source Code C21A. Data shall be recorded continuously.
 - b. The combustion zone temperature of the oxidizer retention chamber of Regenerative Thermal Oxidizer with Source Code C21B. Data shall be recorded continuously.
 - c. The combustion zone temperature of the oxidizer retention chamber of Regenerative Thermal Oxidizer with Source Code C202. Data shall be recorded continuously. This condition only applies if the Permittee elects to install and operate an RTO at the exit of the Board Press/Unloader (Source Code PRS2).
 - d. The inlet and outlet gas stream temperature of the Regenerative Catalytic Oxidizer with Source Code C202. Data shall be recorded continuously. This condition only applies if the Permittee elects to install and operate an RCO at the exit of the Board Press/Unloader (Source Code PRS2).
 - e. The inlet and outlet gas stream temperature of the Thermal Catalytic Oxidizer with Source Code C202 if the TCO is operated in catalytic mode. Data shall be recorded continuously. This condition only applies if the Permittee elects to install and operate a TCO which will operate in catalytic mode at the exit of the Board Press/Unloader (Source Code PRS2).
 - f. The outlet temperature of the Thermal Catalytic Oxidizer with Source Code C202 if the TCO is operated in thermal mode. Data shall be recorded continuously. This condition only applies if the Permittee elects to install and operate a TCO which will operate in thermal mode at the exit of the Board Press/Unloader (Source Code PRS2).
 - g. The secondary voltage for each field of the Wet Electrostatic Precipitator (Source Code WP02). Data shall be recorded continuously.
 - h. The temperature of the gas stream at the outlet of the quench chamber of the Wet Electrostatic Precipitator (Source Code WP02). Data shall be recorded continuously.
 - i. The water flow rate at the mist flow pump of the Wet Electrostatic Precipitator (Source Code WP02). Data shall be recorded continuously.

- 5.2.14 The Permittee shall install, calibrate, maintain, and operate monitoring devices for the measurement of the indicated parameters on the following equipment. Data shall be recorded at the frequency specified below. Where such performance specification(s) exist, each system shall meet the applicable performance specification(s) of the Division's monitoring requirements.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]
- a. Pressure drop indicators on baghouses C203, C204, C205, C206, C207, and C208. Data shall be recorded at least once per week while the applicable baghouse is being used to minimize emissions.
 - b. The cumulative total hours of operation, during all periods of operation, for the emergency generator (Source Code GEN1). Data shall be recorded monthly.
[391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 52.21]
 - c. The gas stream velocity pressure in the total enclosure duct before the inlet of the oxidizer system with Source Code C202 fan. The velocity pressure shall be measured in inches of water column using a pitot tube. Data shall be recorded once per shift.
- 5.2.15 The Permittee shall perform checks to determine if visible emissions are present from baghouses C203, C204, C205, C206, C207, and C208. The check shall be conducted at least once for each day or portion of each day of operation and shall be conducted using the following procedure: [391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]
- a. The person performing the determination shall stand at a distance of at least 15 feet which is sufficient to provide a clear view of the plume against a contrasting background with the sun in the 140 degree sector at his/her back. Consistent with this requirement, the determination shall be made from a position such that the line of vision is approximately perpendicular to the plume director. Only one plume shall be in the line of sight at any time when multiple stacks are in proximity to each other.
- 5.2.16 For each baghouse specified in Condition 5.2.15 determined to be emitting visible emissions, the Permittee shall determine the cause of the visible emissions and correct any problems in the most expedient manner possible. In the maintenance log, the Permittee shall note the cause of the visible emissions, the pressure drop, and other pertinent operating parameters, and the corrective action taken. [391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

- 5.2.17 Within 60 days of initial startup of any operation that exhausts through baghouses C203, C204, C205, C206, C207, or C208, the Permittee shall develop and implement a Preventative Maintenance Program to assure that the provisions of Condition 8.17.1 are met. The program shall be subject to review and modification by the Division and shall include the pressure drop ranges that indicate proper operation for each new baghouse (C203, C204, C205, C206, C207, and C208). At a minimum, the following operation and maintenance checks shall be made on at least a weekly basis, and a record of the findings and corrective actions taken shall be kept in a maintenance log: [391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]
- Record the pressure drop across each baghouse and ensure that it is within the appropriate range.
 - For baghouses equipped with compressed air cleaning systems, check the system for proper operation. This may include checking for low pressure, leaks, proper lubrication, and proper operation of timer and valves.
 - For baghouses equipped with reverse air cleaning systems, check the system for proper operation. This may include checking damper, bypass, and isolation valves for proper operation.
 - Check dust collector hoppers and conveying systems for proper operation.
- 5.2.18 The following pollutant specific emission unit(s) (PSEU) is/are subject to the Compliance Assurance Monitoring (CAM) Rule in 40 CFR 64.

Emission Unit	Pollutant
Energy System and Dryers #5 and #6	CO
Energy System and Dryer #5 and #6	VOC
Energy System and Dryers #5 and #6	PM10

Permit conditions in this permit, for the PSEU(s) listed above, with regulatory citation 40 CFR 70.6(a)(3)(i) are included for the purpose of complying with 40 CFR 64. In addition, the Permittee shall meet the requirements, as applicable, of 40 CFR 64.7, 64.8, and 64.9. [40 CFR 64]

DRAFT Title V Permit Amendment

Norbord Georgia, Inc.

Permit No.: 2493-081-0054-V-02-1

- 5.2.19 The Permittee shall comply with the performance criteria listed in the table below for Carbon Monoxide emissions from the Energy System, Dryer #5, and Dryer #6 (Source Codes ES02, RD05, and RD06).
[40 CFR 64.6(c)(1)(iii)]

Performance Criteria [64.4(a)(3)]	Indicator No. 1 Continuous Emissions Monitoring System
A. Data Representativeness [64.3(b)(1)]	The monitoring probe is located in the exhaust stack at least 2 duct diameters downstream from the point of pollution generation and ½ duct diameter upstream from the effluent exhaust. The CEMS is equipped with a Non-Dispersive Infrared (NDIR) CO analyzer and oxygen monitor. The data acquisition and handling system continuously measures and records data from the CO analyzer.
B. Verification of Operational Status (new/modified monitoring equipment only) [64.3(b)(2)]	CO CEMS will be initially tested and certified, as per 40 CFR 60, Appendix B, Performance Specification 4a. Upon initial testing and certification, each CEMS will be tested and certified using the procedures of Appendix F Procedure 1.
C. QA/QC Practices and Criteria [64.3(b)(3)]	On each day, when the units are operating, a daily calibration test will be performed to evaluate the quality of the data collected by the CEMS.
D. Monitoring Frequency [64.3(b)(4)]	The CO analyzer measures and records the CO concentration every 15 seconds which is used to compute one-hour and three-hour averages..
Data Collection Procedures [64.3(b)(4)]	Records of the CO CEMS output will be maintained at the plant, either in organized paper files or electronically. The data will be retained for five years.
Averaging Period [64.3(b)(4)]	Rolling three-hour average which includes periods of startup, shutdown, and malfunction.

DRAFT Title V Permit Amendment

Norbord Georgia, Inc.

Permit No.: 2493-081-0054-V-02-1

- 5.2.20 The Permittee shall comply with the performance criteria listed in the table below for Volatile Organic Compound emissions from the Energy System, Dryer #5, and Dryer #6 (Source Codes ES02, RD05, and RD06) emissions from.
[40 CFR 64.6(c)(1)(iii)]

Performance Criteria [64.4(a)(3)]	Indicator No. 1 Carbon Monoxide Continuous Emissions Monitoring System	Indicator No. 2 RTO Combustion Zone Temperature
A. Data Representativeness [64.3(b)(1)]	The monitoring probe is located in the exhaust stack at least 2 duct diameters downstream from the point of pollution generation and ½ duct diameter upstream from the effluent exhaust. The CEMS is equipped with a Non-Dispersive Infrared (NDIR) CO analyzer and oxygen monitor. The data acquisition and handling system continuously measures and records data from the CO analyzer.	Appropriate thermocouples installed in the combustion chamber per the manufacturer's design. The thermocouples are designed to be accurate to 4 degrees F or +/- 0.75%.
B. Verification of Operational Status (new/modified monitoring equipment only) [64.3(b)(2)]	CO CEMS will be initially tested and certified, as per 40 CFR 60, Appendix B, Performance Specification 4a. Upon initial testing and certification, each CEMS will be tested and certified using the procedures of Appendix F Procedure 1.	Calibrations performed in accordance with the manufacturer's recommendations.
C. QA/QC Practices and Criteria [64.3(b)(3)]	On each day, when the units are operating, a daily calibration test will be performed to evaluate the quality of the data collected by the CEMS.	Operators check the data for completeness, legibility, reasonableness, and accuracy on a daily basis.
D. Monitoring Frequency [64.3(b)(4)]	The CO analyzer measures and records the CO concentration every 15 seconds which is used to compute one-hour and three-hour averages..	Inlet temperature is recorded at least every 15 minutes and archived in one hour averages that are then used to compute a three-hour average.
Data Collection Procedures [64.3(b)(4)]	Records of the CO CEMS output will be maintained at the plant, either in organized paper files or electronically. The data will be retained for five years.	Records of parametric monitoring required maintenance and corrective actions will be maintained at the mill site, either in organized paper files or electronically. The data will be retained for five years.
Averaging Period [64.3(b)(4)]	Rolling three-hour average which includes periods of startup, shutdown, and malfunction.	Rolling three-hour average.

DRAFT Title V Permit Amendment

Norbord Georgia, Inc.

Permit No.: 2493-081-0054-V-02-1

- 5.2.21 The Permittee shall comply with the performance criteria listed in the table below for Particulate Matter emissions from the Energy System, Dryer #5, and Dryer #6 (Source Codes ES02, RD05, and RD06) emissions from.
[40 CFR 64.6(c)(1)(iii)]

Performance Criteria [64.4(a)(3)]	Indicator No. 1 Wet Electrostatic Precipitator Secondary Voltage	Indicator No. 2 RTO Combustion Zone Temperature
A. Data Representativeness [64.3(b)(1)]	The monitoring system consists of a voltmeter that is part of the WESP instrumentation (TR controller). The minimum accuracy of the voltmeter is ± 0.5 kV.	Appropriate thermocouples installed in the combustion chamber per the manufacturer's design. The thermocouples are designed to be accurate to 4 degrees F or $\pm 0.75\%$.
B. Verification of Operational Status (new/modified monitoring equipment only) [64.3(b)(2)]	Calibrations performed in accordance with the manufacturer's recommendations.	Calibrations performed in accordance with the manufacturer's recommendations.
C. QA/QC Practices and Criteria [64.3(b)(3)]	Operators check the data for completeness, legibility, reasonableness and accuracy on a daily basis.	Operators check the data for completeness, legibility, reasonableness, and accuracy on a daily basis.
D. Monitoring Frequency [64.3(b)(4)]	The voltage in each WESP field is monitored and recorded at least every 15 minutes and archived in one-hour averages that are then used to compute a three-hour average.	Inlet temperature is recorded at least every 15 minutes and archived in one hour averages that are then used to compute a three-hour average.
Data Collection Procedures [64.3(b)(4)]	Records of parametric monitoring required maintenance, and corrective actions will be maintained at the mill site, either in organized paper files or electronically. The data will be retained for five years..	Records of parametric monitoring required maintenance and corrective actions will be maintained at the mill site, either in organized paper files or electronically. The data will be retained for five years.
Averaging Period [64.3(b)(4)]	Rolling three-hour average which includes periods of startup, shutdown, and malfunction.	Rolling three-hour average.

PART 6.0 OTHER RECORD KEEPING AND REPORTING REQUIREMENTS

6.1 General Record Keeping and Reporting Requirements

NEW CONDITIONS

6.1.7 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 6.1.4, the following excess emissions, exceedances, and excursions shall be reported:

[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

- a. Excess emissions: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping which is specifically defined, or stated to be, excess emissions by an applicable requirement)
 - i. Any six-minute period during which the average opacity from the energy system (Source Code ES02) exceeds the opacity standard under 40 CFR 60.43b(f). [40 CFR 60.49b(h)(3)]
- b. Exceedances: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) do not meet the applicable emission limitation or standard consistent with the averaging period specified for averaging the results of the monitoring)
 - i. Any three-hour rolling average NO_x emission rate which exceeds 78.4 pounds per hour for the energy system and dryers combined stack (Source Codes ES02, RD05, and RD06). For purposes of this condition, each clock hour begins a new three-hour average and the three-hour rolling average includes periods of startup, shutdown, and malfunction.
 - ii. Any three-hour rolling average CO emission rate which exceeds 78.4 pounds per hour for the energy system and dryers combined stack (Source Codes ES02, RD05, and RD06). For purposes of this condition, each clock hour begins a new three-hour average and the three-hour rolling average includes periods of startup, shutdown, and malfunction.
 - iii. Any six-minute average opacity measurement by the COMS required by Condition 5.2.10.c, that is greater than 20 percent including periods of startup, shutdown, and malfunction.

- c. Excursions: (means for the purpose of this Condition and Condition 6.1.4, any departure from an indicator range or value established for monitoring consistent with any averaging period specified for averaging the results of the monitoring)

Energy System and Wood Flake Dryers

- x. Any three-hour period during which the average oxidizer retention chamber temperature for Regenerative Thermal Oxidizer C21A is 50 degrees F below the average oxidizer retention chamber temperature derived by following the requirements in Condition Nos. 4.2.2 and 4.2.6. For purposes of this condition, each clock hour begins a new three-hour period and the Permittee does not need to account for any time period when the applicable process equipment is not in operation.
- xi. Any three-hour period during which the average oxidizer retention chamber temperature for Regenerative Thermal Oxidizer C21B is 50 degrees F below the average oxidizer retention chamber temperature derived by following the requirements in Condition Nos. 4.2.2 and 4.2.6. For purposes of this condition, each clock hour begins a new three-hour period and the Permittee does not need to account for any time period when the applicable process equipment is not in operation.
- xii. Any three-hour average secondary voltage on the Wet Electrostatic Precipitator (Source Code WP02) that is outside of the range derived by following the requirements in Condition Nos. 4.2.2 and 4.2.3. For the purpose of this condition, each clock hour begins a new three-hour period and the Permittee does not need to account for any time period when the applicable process equipment is not in operation.
- xiii. Any three-hour average quench chamber outlet temperature on the WESP (Source Code WP02) that is outside of the range derived by following the requirements in Condition Nos. 4.2.2 and 4.2.4. For the purpose of this condition, each clock hour begins a new three-hour period and the Permittee does not need to account for the time period when the applicable process equipment is not in operation.
- xiv. Any three-hour average water flow rate at the mist flow pump on the WESP (Source Code WP02) that is outside of the range derived by following the requirements in Condition Nos. 4.2.2 and 4.2.5. For the purpose of this condition, each clock hour begins a new three-hour period and the Permittee does not need to account for any time period when the applicable process equipment is not in operation.
- xv. Any three-hour average CO emissions rate that exceeds the mass emission rate in pounds per hour established in Condition 4.2.7. For purposes of this condition, each clock hour begins a new three-hour period and the Permittee does not need to account for any time period when the applicable process equipment is not in operation. This condition defines an excursion of Condition 3.3.20.

Press/Unloader System

- xvi. Any three-hour period during which the average oxidizer retention chamber temperature for Regenerative Thermal Oxidizer C202 is 50 degrees F below the average oxidizer retention chamber temperature derived by following the requirements in Condition Nos. 4.2.9 and 4.2.10. For purposes of this condition, each clock hour begins a new three-hour period and the Permittee does not need to account for any time period when the applicable process equipment is not in operation. This condition only applies if the Permittee elects to construct and operate a Regenerative Thermal Oxidizer at the outlet of the Board Press/Unloader PRS2.
- xvii. Any three-hour period during which the difference between the average inlet and outlet temperature of the Regenerative Catalytic Oxidizer C202 is 50 degrees below the difference between the average inlet and outlet temperatures derived by following the requirements in Condition Nos. 4.2.9 and 4.2.11. For purposes of this condition, each clock hour begins a new three-hour period and the Permittee does not need to account for any time period when the applicable process equipment is not in operation. This condition only applies if the Permittee elects to construct and operate a Regenerative Catalytic Oxidizer at the outlet of the Board Press/Unloader PRS2.
- xviii. Any three-hour period during which the difference between the average inlet and outlet temperature of the catalytic mode of Thermal Catalytic Oxidizer C202 is 50 degrees below the difference between the average inlet and outlet temperatures derived by following the requirements in Condition Nos. 4.2.9 and 4.2.12. For purposes of this condition, each clock hour begins a new three-hour period and the Permittee does not need to account for any time period when the applicable process equipment is not in operation. This condition only applies if the Permittee elects to construct and operate a Thermal Catalytic Oxidizer in catalytic mode at the outlet of the Board Press/Unloader PRS2.
- xix. Any three-hour period during which the average outlet temperature for Thermal Catalytic Oxidizer C202 is 50 degrees F below the average outlet temperature derived by following the requirements in Condition Nos. 4.2.9 and 4.2.13. For purposes of this condition, each clock hour begins a new three-hour period and the Permittee does not need to account for any time period when the applicable process equipment is not in operation. This condition only applies if the Permittee elects to construct and operate a Thermal Catalytic Oxidizer and operate it in thermal mode at the outlet of the Board Press/Unloader PRS2.
- xx. Any time the velocity pressure measurement made in the total enclosure duct before the inlet of the oxidizer system (C202) fan is outside the range established in Condition 4.2.14 during operation of applicable process equipment.

Baghouses

- xxi. Any time any baghouse specified in Condition 5.2.15 is determined to be emitting visible emissions.

Emergency Generator

- xxii. Any time fuel oil combusted in the emergency generator (Source Code GEN1) exceeds 2.5 percent sulfur by weight.
- xxiii. Any twelve consecutive month total hours of operation of the emergency generator (Source Code GEN1) which equals or exceeds 250 hour.

6.2 Specific Record Keeping and Reporting Requirements

NEW CONDITIONS – RECORD KEEPING

- 6.2.3 The Permittee shall record and maintain daily records of the amount of wood and natural gas combusted in the energy system (Source Code ES02). [40 CFR 60.49b(d)]
- 6.2.4 The Permittee shall determine and record on a monthly basis the twelve consecutive month average capacity factors for wood and natural gas. The capacity factor shall be calculated for each calendar month. [40 CFR 60.49b(d)]
- 6.2.5 The Permittee shall verify that each shipment of fuel oil received for combustion in emergency generator GEN1 complies with the specifications for Low Sulfur No. 1-D or Low Sulfur No. 2-D as defined by the American Society for Testing and Materials (ASTM) in ASTM D975-01 – “Standard Specifications for Diesel Fuel Oils.” Supplier certifications shall contain the name of the supplier and a statement from the supplier that the fuel oil is Low Sulfur No. 1-D or Low Sulfur No. 2-D as defined in ASTM D975-01. [391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 52.21]
- 6.2.6 The Permittee shall use the hour meters required by Condition 5.2.14.b to determine and record the following: [391-3-1-.02(6)(b)1., 40 CFR 52.21, and 40 CFR 70.6(a)(3)(i)]
 - a. The net operating hours for the emergency generator (Source Code GEN1) during every calendar month.
 - b. The total operating hours for the emergency generator (Source Code GEN1) for the twelve consecutive month period ending with each calendar month.

NEW CONDITIONS - REPORTING

- 6.2.7 The Permittee shall submit a Part 63 Initial Notification which includes the information in 40 CFR 63.9(b)(2)(i) through (v), as they pertain to new generator GEN1, and a statement that generator GEN1 has no additional requirements, explaining the basis of the exclusion. [40 CFR 63.6645(d)]
- 6.2.8 The Permittee shall submit notification of the initial startup of the energy system (Source Code ES02) as required by 40 CFR 60.7 and 40 CFR 60.49b(a).

- 6.2.9 The Permittee shall submit to the U.S. EPA Region 4 the initial performance test data for the particulate matter tests required by Condition 4.2.6. [40 CFR 60.49b(b)]
- 6.2.10 The Permittee shall furnish the Division written notification as follows:
[40 CFR 52.21; 40 CFR 60.7]
- a. A notification of the actual date of commencement of construction of each affected facility listed in Table 3.1.1, postmarked within 15 days after such date. For purposes of this permit, the definition of “commence” is given in 40 CFR 52.21(b)(9).
 - b. A notification of the actual date of initial startup of each affected facility defined in Table 3.1.1, postmarked within 15 days after such date. For purposes of this permit, “startup” shall mean the setting in operation of an affected facility for any purpose.
 - c. Certification that a final inspection has shown that construction of each affected facility defined in Table 3.1.1 has been completed in accordance with the application, plans, specifications and supporting documents submitted in support of this permit.

PART 7.0 OTHER SPECIFIC REQUIREMENTS

7.1 Operational Flexibility Associated with this Amendment

Not Applicable

7.2 Off-Permit Changes Associated with this Amendment

Not Applicable

7.3 Alternative Requirements Associated with this Amendment

[White Paper #2]

Not Applicable

7.4 Insignificant Activities Associated with this Amendment

(see Attachment B for the list of Insignificant Activities in existence at the facility at the time of permit issuance)

7.5 Temporary Sources Associated with this Amendment

[391-3-1-.03(10)(d)5 and 40 CFR 70.6(e)]

Not Applicable

7.6 Short-term Activities Associated with this Amendment

(see Form D5 “Short Term Activities” of the Permit application and White Paper #1)

Not Applicable

7.7 Compliance Schedule/Progress Reports Associated with this Amendment

[391-3-1-.03(10)(d)3 and 40 CFR 70.6(c)(4)]

None applicable.

7.8 Emissions Trading Associated with this Amendment

[391-3-1-.03(10)(d)1(ii) and 40 CFR 70.6(a)(10)]

Not Applicable

7.9 Acid Rain Requirements Associated with this Amendment

Not Applicable

7.12 Revocation of Existing Permits and Amendments

The following Air Quality Permits and Amendments are subsumed by this permit and are hereby revoked:

Air Quality Permit Number(s)	Dates of Original Permit Issuance or Amendment
NA	NA

7.13 Pollution Prevention Associated with this Amendment

Not Applicable

7.14 Specific Conditions Associated with this Amendment

None applicable.

Attachments

- A. List of Standard Abbreviations and List of Permit Specific Abbreviations
- B. Insignificant Activities Checklist, Insignificant Activities Based on Emission Levels and Generic Emission Groups
- C. List of References

List Of Standard Abbreviations

[illegible]

PEMS	Predictive Emissions Monitoring System

ATTACHMENT B

NOTE: Attachment B contains information regarding insignificant emission units/activities and groups of generic emission units/activities in existence at the facility at the time of Permit issuance. Future modifications or additions of insignificant emission units/activities and equipment that are part of generic emissions groups may not necessarily cause this attachment to be updated.

GENERIC EMISSION GROUPS

Emission units/activities appearing in the following table are subject only to one or more of Georgia Rules 391-3-1-.02 (2) (b), (e) &/or (n). Potential emissions of particulate matter, from these sources based on TSP, are less than 25 tons per year per process line or unit in each group. Any emissions unit subject to a NESHAP, NSPS, or any specific Air Quality Permit Condition(s) are not included in this table.

Description of Emissions Units / Activities	Number of Units (if appropriate)	Applicable Rules		
		Opacity Rule (b)	PM from Mfg Process Rule (e)	Fugitive Dust Rule (n)
Grinding Operation for PSD Expansion	1	X	X	

ATTACHMENT C

LIST OF REFERENCES

1. The Georgia Rules for Air Quality Control Chapter 391-3-1. All Rules cited herein which begin with 391-3-1 are State Air Quality Rules.
2. Title 40 of the Code of Federal Regulations; specifically 40 CFR Parts 50, 51, 52, 60, 61, 63, 64, 68, 70, 72, 73, 75, 76 and 82. All rules cited with these parts are Federal Air Quality Rules.
3. *Georgia Department of Natural Resources, Environmental Protection Division, Air Protection Branch, Procedures for Testing and Monitoring Sources of Air Pollutants.*
4. *Georgia Department of Natural Resources, Environmental Protection Division, Air Protection Branch, Procedures for Calculating Air Permit Fees.*
5. Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I: Stationary Point and Area Sources. This information may be obtained from EPA's TTN web site at www.epa.gov/ttn/chief/ap42.html.
6. The latest properly functioning version of EPA's **TANKS** emission estimation software. The software may be obtained from EPA's TTN web site at www.epa.gov/ttn/chief/tanks.html.
7. The Clean Air Act (42 U.S.C. 7401 et seq).
8. White Paper for Streamlined Development of Part 70 Permit Applications, July 10, 1995 (White Paper #1).
9. White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program, March 5, 1996 (White Paper #2).